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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,533	01/29/2004	William Mark Nichols	NORT 64306	5368

7590 05/26/2005

Robert P. Lenart  
Pietragallo, Bosick & Gordon  
One Oxford Centre, 38th Floor  
301 Grant Street  
Pittsburgh, PA 15219

EXAMINER
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ZANELLI, MICHAEL J

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/767,533	<b>Applicant(s)</b> NICHOLS ET AL.	
	<b>Examiner</b> Michael J. Zanelli	<b>Art Unit</b> 3661	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 9 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. The application filed 1/29/04 has been examined. Claims 1-16 are pending.
2. The IDS filed 1/29/04 has been considered.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1-8 and 10-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McTamaney et al. (5,170,352).

A. As per claims 1 and 10, McTamaney discloses a method and apparatus for analyzing a plurality of images of a route between a vehicle location and a desired destination whereby the vehicle is controlled to follow the route while avoiding obstacles (Abs.; Fig. 4; col. 3, lines 32-41, 63-65; col. 5, lines 43+). Although the claim refers to a “taxi” route, the route is none the less a ground route and thus equivalent to the “surface” upon which the vehicle of McTamaney operates. In the alternative, one of ordinary skill in the vehicle navigation arts would have readily recognized that a “vehicle” operating on a taxiway functions just like a “vehicle” on a road or other hard surface. The image and collision avoidance processing of McTamaney would have been applicable to either surface.

B. As per claims 2-6 and 11-13, as above whereby image analysis, including edge analysis, is performed on a sequence of image frames to detect both static and moving objects relative to the background (col. 5, line 3 to col. 6, line 68).

C. As per claims 7 and 14, as above whereby McTamaney “georectifies” coordinates of one image to project the same point on a succeeding image (col. 5, lines 43-60).

D. As per claims 8 and 15, as above whereby McTamaney uses at least visual sensors (Fig. 4:29).

6. Claims 1, 8, 10 and 15 are further rejected under 35 U.S.C. 102(e) as being anticipated by Kapadia et al. (6,606,035).

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- A. As per claims 1 and 10, the claimed subject matter may be broadly interpreted to represent an airport runway monitoring system such as disclosed by Kapadia. Kapadia compares real time images and stored images of airport runways/taxiways to detect "debris" thereon. An alert system is used to indicate the status of the runway/taxiways (i.e., whether the route is clear)(cols. 3-4; col. 5, lines 35-60).
- B. As per claims 8 and 15, as above whereby visual sensors may be used (col. 3, lines 7-15).
7. Claims 9 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As per claims 9 and 16, the prior art of record does not show or reasonably suggest, in combination with the other claimed subject matter, controlling the taxiing/vehicle in response to the temperature and speed of the vehicle.
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited documents are of general interest.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969. The examiner can normally be reached on Monday-Thursday 8:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/mjz

  
MICHAEL J. ZANELLI  
PRIMARY EXAMINER